

FLUSHING VALVE WITH FLEXIBLE RINGED HOSE FOR TOILETS

DT01 Rec'd PCT/PTC 16 DEC 2004

FIELD OF THE INVENTION

- 5 The present invention is related to the traditional flushing valves for toilets which empty the tank to the toilet in order to evacuate the waste to the drainage.

BACKGROUND OF THE INVENTION

- The flushing valves known use a cone or lid to cover the hole in the center of the tank, they
10 open and close this hole to flush the toilet.

DESCRIPTION OF THE TECHNICAL PROBLEM, SOLUTION TO THE SAME AND
ADVANTAGEOUS EFFECTS.

- 15 The main technical problem is the mechanical functioning of the flushing valves, which are always letting the water leak, this is because the cone or lid that cover the center hole of the tank is old, twisted, hardened, wrinkled or something like dirt or hair is between the cone or lid and the edge of the hole. Or maybe the seat of the cone or lid is worn out or dirty.

20 SOLUTIONS.

To solve the problem you have to install a Flushing Valve with Flexible Ringed hose which is going to provide the necessary water for a discharge to clean the bowl including the amount that has to remain in the bowl avoiding the waste of water that traditional valves leak.

ADVANTAGEOUS EFFECTS.

With this flushing valve with flexible ringed hose you totally eliminate the waste of water because of leakage. On the other hand, the existing typical flushing valves receive water into the pipe through a little hose to fill the bowl . This little hose is supplying water continuously while 5 the tank is being filled. This way the waste is approximately one liter on each flush. The little hose supplies more water than it needs to fill the bowl and the rest goes to waste.

DIFFERENCE BETWEEN THIS INVENTION AND SIMILAR INVENTIONS.

The main difference is: This flushing valve has no lid or cone as the conventional ones. It has 10 a flexible ringed hose which is sealed to the center hole in the tank and it bends to take the necessary water for one discharge going back to its original vertical position when you release the handle that pulls the wire to bend it. You supply 12 liters of water in the tank but you need only six liters for one discharge, the rest of the water remains in the tank . They are useful only to push the first six liters on its way out. It is very important to mention that it works with 15 less than six liters.

BRIEF DESCRIPTION OF THE INVENTION.

In figure #1 you can appreciate the seven main parts of this system. The couple (1) that holds the hose (2) which is sealed by a band (10) to the couple (1) On the lower threaded section of 20 the couple (1) there is a gasket (3) that will seal the tank by the nut (4) and the gasket (5) will be placed at the end of the couple (1) to sit the tank to the bowl and tighten it by screws (8) and (9) that appear in figures #5 and #7; the handle (7) in figure #6 will be used to pull the wire (6) figure #1 to bend the hose and flush for a discharge. In figure #5 you can see the right screw (8) which attaches the tank to the bowl , it is modified on its upper part by having a rod with a 25 slight angle along with a ring in the upper section . The left screw (9) is a traditional one which

is attaching the tank to the bowl in the normal way. It is important to mention that we are going to add a nut, a gasket and a washer to each screw to seal the tank before attaching it to the bowl.

5

DESCRIPTION AND NUMBERING OF THE DIFFERENT PARTS IN THE DRAWINGS.

Figure #1.- Front view of the parts of this valve separated.

Figure #2.- Front view of this valve with parts assembled.

Figure #3.- Front view in which you can appreciate the hose bent pulled by the handle through
10 the wire and guided by the loop on top of the screw, you can also appreciate the left screw
attaching the tank.

Figure #4.- Transversal view of the valve parts separated where you can appreciate the
reduction in the inner diameter lower part of the couple(14).

Figure #5.- Front view of screw (8) modified to guide the wire or cable.

15 Figure #6.- Front view of the pulling handle.

Figure #6.- Front view of left screw (9) to attach the bowl.

Referring to these figures this flushing valve is formed by an ensemble of a plastic couple(1)
figure #1 which has a flat area in its upper part (11) figure #1 to insert in the hose (2) figure
#1 going down the couple has a circular lip top (12) figure #1 that holds the gasket (3) figure #1
20 that seals the tank in the inside. down the couple in the lower part it is threaded (13) figure #1
it receives the mentioned packing (3) figure #1 the nut (4) figure #1 and the rubber packing bowl
type (5) figure #1; through this couple(1) figure #1 the hose (2) figure #1 sends the water to the
bowl through the hole (14) figure #1. the hose (2) figure #1 has at the end in the lower part a
skirt (15) figure #1 to be inserted by part (11) figure #1 of couple (1) fig #1 attached by a brace
25 (10) figure #1 to tighten, seal both pieces; continuing with the flexible ringed hose (2) figure #1

at its upper part at the penultimate ring (16) figure #1 there will be a string or wire (6) tied to the
hose to pull the hose. The conic rubber packing (3) figure #1 is going to be inserted through the
threaded part of the couple (1) figure #1. The nut (4) figure #1 fits the threaded part of the
couple(1) figure #1 , the packing bowl kind (5) figure #1 is inserted through the threaded part of
the couple (1) figure #1 to cover the nut, this way it seals the orifice of the bowl. The cable (6)
figure #1 has a double staple (17) figure #1 with two orifices through which the cable goes to
make a loop sealing the staple using tweezers. this way it will hold the hose (2) figure #1 ; The
end of the cable (18) figure #1 goes through the ring (19) figure #5 and it is tied to one of the
holes of the extreme part of the handle (7) figure #6. The screw (8) figure #5 has been modified
at its top (19) figure #5 adding an inclined ring. The screw (9) figure #7 in the left side attaches
the tank in the normal way . The band clip (10) figure #1 is placed in the low part (15) figure #1
of the hose (2) figure #1 to tight the screw (20) figure #1 to seal the hose (2) figure #1 with the
couple (1) figure #1. The hose may be sealed not only by a band but by an o-ring or glue to the
couple(1) figure #1.